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A Child Health Program

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INFANT, preschool and school services are features of every generalized public health program. In some departments they are described and carried out more or less as independent services, while in others they are considered under the general heading of child welfare or child health services. In the Central Vancouver Island Health Unit the latter procedure has been adopted in order to carry out the general idea which we are developing of making the service a continuous one from birth at least on through to early adult age. The advantages or disadvantages of the use of this general term from an administrative point of view will, we believe, be far exceeded or outweighed, as the case may be, by its implications as they affect the public. More general use of this term may, for example, help parents to realize that child health services do not stop at one year of age or begin only when the child enters school, but should be applied throughout the whole of childhood.

The development and provision of a continuous service has been attempted as a result of criticism of the programs which we ourselves have carried out in the past. School services, for example, were considered in our experience to require too much of the time of the medical officer and the public health nurse in proportion to the other obvious needs of the community to justify continuation of the recognized and more or less standardized school program as carried out in many parts of this country. Again the preschool program, except for immunization services provided for those in this group and the usual preschool round-up for those about to enter school, was found to be practically non-existent, leaving a wide-open gap between the infant welfare and school services. Even the infant welfare service was considered

in need of revision and simplification if only for the purpose of public health education.

The child health program which we are developing retains most of the usual and approved features common to infant and preschool services, and emphasis is laid on the importance of the use of the demonstration and teaching opportunities by the public health nurse in the homes and at clinics. In addition the program takes recognition of the main problems which the average parent has to contend with in bringing up a normal full-term baby from infancy to young adulthood. These problems are considered to be primarily those concerned with nutrition, communicable disease control, child guidance, and correction of defects. To this list we have added, for our own purpose, the problem of public health education as it applies especially to older children. Using a slight modification of the usual terminology, these needs of the individual as public health problems have been considered as the individual passes through one period into another, as follows:

CHILD HEALTH

Infant and early preschool period	Late preschool period	School period
Nutrition	Nutrition	Nutrition
Communicable Disease Control	Communicable Disease Control	Communicable Disease Control
Child Guidance	Child Guidance	Child Guidance
	Correction of Defects	Correction of Defects
		Public Health Education

In a consideration of child health as a whole in this manner, it is apparent that three problems are common to the whole period of childhood—those concerned with nutrition, communicable disease control, and child guidance. The whole program, therefore, has been reoriented so as to permit development of a continuous service based on these particular problems. For general use literature has been prepared on each of these three subjects. Where we cannot give first-hand information, we are distributing this literature, using a mailing list based on the register of births and preschool children, in recognition of the fact that the public health nurse cannot reach and serve directly all those needing and willing to use information placed at their disposal. The three articles mentioned above are considered as a trilogy, each having child health as a common theme, and an effort has been made to bring together under each title as much pertinent information as possible without repetition. These articles are longer and give more information than is contained in the average pamphlet but are shorter than any publication can be which attempts to deal with the whole subject under one cover. It is quite possible, therefore, for the average person to read and assimilate reasonably any one of them at one session. This literature summarizes without giving procedures the

essential features of this part of the program which are being stressed, and for that reason it may be of interest to review the problems given consideration.

Feeding the Normal Child

The subject of nutrition is dealt with in this article, as in the carrying out of the program, from the specific as well as the general point of view. The importance of nutrition in the prenatal period to both mother and child is emphasized in a general way. Specific information is provided concerning the preparation and calculation of the infant's formula, the preparation of some special diets or foods, the addition to the diet of solid foods and vitamin supplements, common feeding disorders, and development as it is related to and dependent on nutrition in the infant and young child. In addition, emphasis is placed on the application of Canada's Official Food Rules when the child is on a balanced diet at or near the end of the first year. In so doing it is hoped to influence parents who have followed approved feeding methods scrupulously during the first year of the child's life, to continue to do so when infancy is passed and the child begins to eat with the rest of the family. If this is done, it is apparent that the whole family will benefit nutritionally in that the family incidentally will eat food prepared with the child's special needs for a balanced diet in mind.

Protecting the Child

This article dealing with communicable disease control outlines the need for care in preventing diseases of the respiratory and intestinal tracts. It also discusses immunization against the group of diseases which can be prevented by use of specific measures and outlines the group of minor communicable diseases which the child sooner or later almost certainly will get. In preparing this article on communicable disease control and in carrying out the program, we have stressed deliberately the importance of sanitation in relation to the subject as a whole. We feel that too often sanitation is considered as something apart from communicable disease control or as something only remotely connected with it. We have tried to point out that sanitation *is* communicable disease control and as such has a very important bearing on health, in rural and semi-rural districts especially. The emphasis, therefore, has been placed on sanitation within and without the home rather than on immunization, not because we do not consider the latter is important but because we feel that the former is too often neglected.

Understanding the Normal Child

Our infant welfare, preschool and school services in the past have stressed the purely physical side of public health. There is an obvious need, however, for the development of a preventive program in the field of mental health as it applies particularly to child health programs. We have ventured into the field of child guidance in the belief that one does not need to have a special gift or special training, other than that which can be acquired by the average

public health worker, to be of considerable help to those in need of it. It is recognized that many asocial tendencies and behaviour problems in children and much of the so-called delinquency can be prevented or cured by the proper care and understanding of children. Given a sympathetic attitude and some of the excellent literature on the subject now available, it should be possible for the average health officer himself to handle many of the simpler but potentially serious behaviour problems which he encounters in his work. Failing that, he can at least still make it possible for the genuinely interested parent to help himself. Obviously adult education is the key to the problem and in no field is prevention so worthwhile. Child guidance is essentially a problem in public health, and it is our impression that if we do not take the steps necessary to meet the obvious need more directly, others will do it for us.

In considering the literature which is available today, we have found that much of it is excellent, intensely interesting, and easy to read. Some of it, on the other hand, is of little use to the average reader. In reviewing and abstracting this literature we have tried to avoid the use of technical material and articles by authors intended for the specialist in this field.

The article which we have prepared for distribution outlines the social-emotional needs of the child and then discusses what are considered to be approved methods for preventing or for dealing with a considerable number of the more common problems parents will encounter in dealing with young children. At first glance it may appear as though the article is concerned only with the younger child. Obviously we are trying primarily to reach and interest the new younger parents. Since, however, the social-emotional needs of the individual are common to all ages, we feel that the material will be of value to parents of older children as well, and forms, in any case, a basis for further study by them.

The three articles just described dealing with problems considered to be common to the whole period from infancy to early adulthood, are now being put out in an attractive form for the use of public health workers generally throughout the Province.

Other factors in addition to those already discussed which are considered to be of particular importance in a child health program are dealt with below.

Detection and Correction of Defects in Infants and Preschool Children

The importance of the early detection of both physical and behaviour or personality defects is generally recognized. The development of a practical program to this end, however, has entailed considerable re-adjustment of the various services concerned. The infant welfare service has been increased and extended to give service to a greater number and the detection of defects in infants is a part of the routine procedure in dealing with this group. Considerably more attention is being given also to the preschool child in an effort to make the service a continuous one. The preschool round-up of school-age children in June of each year, formerly a fixture in this district, has been discontinued. To take its place the public health nurses are seeking out these

older preschool children in the homes and through clinics for immunization and other purposes, in the years before they start school, in an effort to have defects detected and corrected at an early age. In the course of all such contacts, parents of these younger children are urged to make greater use of the public health and medical services available in the community.

School Medical and Nursing Services

Revision of these services was considered an essential step in the development of a continuous service. Since these have been discussed elsewhere,* it is sufficient to state here that the routine medical examination of school children has been discontinued. The public health nurse and the teacher are primarily responsible for the supervision of the health of the school children and for the detection of both physical defects and behaviour problems. Children are referred to the school medical officer only as a result of a nurse-teacher conference. The amount of time spent in the schools routinely by both the nurse and the medical officer has been reduced materially, and a classroom record providing for the noting of both physical defects and behaviour problems has been re-introduced into the schools.

This classroom record is intended for the use of both the health authorities and the teacher. The nurse or school medical officer uses it for the noting and disposal of defects found at the time of the physical inspection or examination. The teacher uses the form for consideration and noting of both physical and behaviour problems coming to her attention in the course of her day-to-day contact with the school children. The problems found by the teacher are cleared with the student counsellor in schools where a counsellor is a member of the school staff, and are dealt with by the counsellor or referred on to the public health nurse and, if necessary, to the school medical officer. Otherwise the teacher discusses the general health and behaviour problems directly with the public health nurse.

Behaviour problems especially are dealt with by the health authorities through the teacher, the child, and the home. Cases which cannot be dealt with successfully in this manner are referred to child guidance clinics which are held in this centre periodically.

Public Health Education in Schools

We have long felt that since public health personnel spent so much time in schools concerning themselves with matters that might easily have been dealt with otherwise or with less time, opportunities for giving more important service received little or no consideration. Public health education in schools assuredly is a subject entitled to receive much more attention from our personnel than it has received in the past. In general we believe that a program in public health education should be based on a recognition of the public health services as a means to an end. This requires a knowledge of the available community services, what they are, what they cost, how they

*Harold, T. C., and Hershey, J. M.: School Medical Services. Canad. J. Pub. Health, 1945, 36: 349.

are carried out, how they can be used, and the savings they represent to the community as a whole. In view of the difficulties we all meet with in properly informing the general public regarding public health matters, we feel that much time and effort will be saved by making as certain as we can that the citizens of tomorrow are better founded in basic public health principles and procedures than were their predecessors.

In carrying out public health education in the schools we feel that it is the responsibility of the health department, on the one hand, to advise, recommend, make available suitable material and information and provide special or technical help when this is needed. The actual teaching, final choice of available material, and planning of the curriculum, on the other hand, are the responsibility of the schools through their own specialists. Fortunately the interests of the Department of Education as outlined in their curriculum for health teaching are identical with those of the health authorities in so far as the schools are concerned. If, however, the teachers receive no help from local health departments and have to rely on the purely textbook picture of what may be done in some distant parts of the country, the subject can perhaps never be anything but dry and uninteresting. In contrast, the local or nearby picture should provide teachers with sufficient first-hand material to make health teaching not only practical but of lasting interest. The responsibility of making public health teaching in the schools worthwhile is obviously a joint one and it is time we did our part in a more satisfactory manner.

In this Health Unit we are fortunate in that the educationalists with whom we have to work are highly competent, progressive, and genuinely interested in our common problems. We have had no difficulty, therefore, in being able to develop with them a tentative program in public health education and it will be interesting to assess this effort in another year or two.

Summary

The child health program described in this article is based on a revision of infant, preschool and school services. The program has been developed around what are considered to be the chief problems which parents have to deal with throughout the period of childhood, namely, nutrition, communicable disease control, child guidance and the correction of defects. Literature dealing with the three problems considered to be common to the whole period of childhood is described.

Acknowledgments

The program described here has been developed as a result of staff conferences in the Central Vancouver Island Health Unit. The writer acknowledges with pleasure his indebtedness to all members of the staff for their interest and co-operation in putting into effect the revised program, and particularly to Miss Ann Murray, Miss Barbara Smith, Miss Mary Maclean and Miss Joyce Leslie, public health nurses on the staff, for their helpful criticisms and practical suggestions and assistance in the development of the program and literature.

An Epidemic of Septic Sore Throat at Salmon Arm, B.C.

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IN April, 1945, reports were received in the Provincial Board of Health offices in Victoria, B.C., indicating an outbreak of septic sore throat in the city of Salmon Arm. This community, with a population of 836 according to the 1941 census, is situated on the south arm of Shuswap Lake where the highway from the Okanagan Valley to the south meets the Trans-Canada Highway. The main line of the Canadian Pacific Railway passes through the town, which serves as the principal shopping and business centre for the surrounding rural municipality of Salmon Arm. The rural district has a population of about 1,800 and the chief occupation is mixed farming and fruit-growing.

The city and municipality are served by two general practitioners, one of whom acts as part-time medical health officer for the city and the other for the municipality. A well-equipped community hospital, run by a local board, serves the needs of the whole district.

Enquiries made by Provincial health authorities supported the original report that an epidemic of septic sore throat had broken out in this area and steps were taken immediately to investigate the outbreak. Following a preliminary investigation by staff members from the nearby North Okanagan Health Unit, further assistance was sent to the affected area from the central office.

As a result of consultations with the local physicians, it was found that a large number of cases of septic sore throat had been treated since March 24th. Both doctors felt that they had two distinct conditions to deal with. One was diagnosed as septic sore throat, enlarged cervical glands and hyperpyrexia. The other, diagnosed as acute mononucleosis, showed little or no sore throat but hyperpyrexia and markedly enlarged anterior cervical glands. Throat swabs from a few cases diagnosed as septic sore throat were reported to be positive for haemolytic staphylococci and streptococci, but no swabs had been taken from the cases diagnosed as mononucleosis. No differential blood counts had been obtained on any cases.

For the purpose of further differentiation, throat swabs and blood smears on the eight hospital cases were submitted to the Provincial Branch Laboratory at Kamloops. All nose and throat swabs were reported negative for haemolytic organisms while the blood smears showed no increase in mononuclears sufficient to justify the diagnosis of mononucleosis. A little later, when it was possible to

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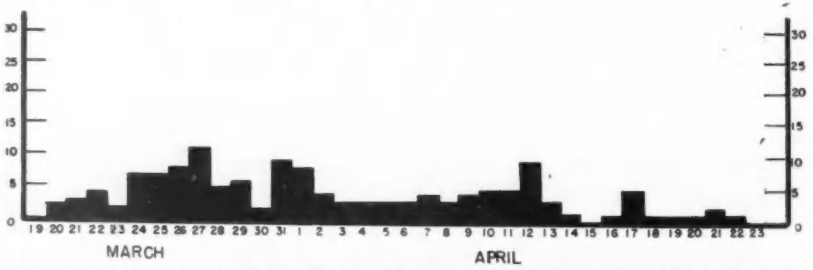
get a complete list of all the patients, comparisons made on the basis of date of onset and age of the patients showed that diagnoses of mononucleosis commenced well after the septic sore throat epidemic had become established, and ceased with the epidemic. The evidence showed a direct relationship between the two and it was concluded that the diagnosis of acute mononucleosis was incorrect and that, for all practical purposes, cases reported as such could be accepted as cases of septic sore throat showing mainly glandular symptoms.

The actual investigation of the epidemiological features of the outbreak was begun by obtaining from the practising physicians a list of the names and addresses of all persons known to have been affected. All individuals in this group who could be contacted were then visited by one of the staff members, and all pertinent information obtained was tabulated on an individual investigation form. A total of 136 cases was listed and it was found possible to interview 110 of them.

The breakdown of the information collected in this manner showed that all but 13 of the cases had occurred in the town itself. This finding was contrary to the general opinion, which was to the effect that the outbreak in the town was part of a widespread epidemic affecting the district as a whole. A little over half of those affected (55 per cent) were of school age or under, and the remainder (45 per cent) were over 18 years of age.



Number of Cases of Septic Sore Throat at Salmon Arm, B.C., by Day of Occurrence

The information showed that, while there had been sporadic cases in the district previous to March 20th, an outbreak of an explosive nature occurred commencing about that time, so that within a period of one week there were forty known cases. This peak of infection was followed by a slight lull and then by another increase in incidence which reached its height at approximately April 1st, as shown in the accompanying diagram. A third peak occurred on April 12th.

The most striking and interesting information brought out by this survey of cases, however, was that concerned with the source of milk used by the individuals who were or had been ill. The town is supplied with raw milk by seven distributors, the bulk of the business being controlled by three. Of the 110 cases visited, it was possible to ascertain the source of the milk supply for 98, as follows:

Dairy Supply	*Cases*	*Per Cent*
A	89	81.0
B	2	2.0
C	7	6.0
Unknown	12	11.0
	110	100.0

As the figures show, a direct relationship with the "A" Dairy was established in 81 per cent of the cases investigated. The investigation failed to reveal any other food or drink as a possible common source of infection. Included in the cases whose milk supply was unknown, or whose home supply was from a dairy other than "A", were a number of persons who frequented the "X" restaurant where milk from the "A" dairy was mixed with milk from other sources. It was possible to assume, therefore, that 85 to 90 per cent of the total cases investigated consumed milk supplied by the "A" dairy.

Of further interest in regard to the use of milk was the information obtained in the course of the interrogation in certain homes. For example, it was found that in one family the father was the only one who became ill, while two small children and the mother remained well. It was learned on further questioning that milk in this home, obtained from the "A" dairy, was pasteurized in the home for use by the children whereas the father consumed it raw. In another family of three it was found that only the father and son had been ill. Further investigation revealed that they consumed raw milk from the "A" dairy as a beverage, while the mother, who did not become ill, used it only in tea and coffee.

Cases occurring in the rural district, as pointed out above, were few. In certain of these instances it was found that the persons affected had in reality been living in town for some time. One family resident in the rural district purchased their milk in town regularly from the "A" dairy.

A small number of persons affected were considered to be secondary cases and to have been infected as a result of close contact with persons already ill with septic sore throat. It was found that a mother and two children had been seriously ill with the infection although at no time, apparently, had they used milk from the "A" dairy. On further enquiry it was found that the mother had helped to nurse members of a neighbour's family who were acutely ill at the one time and she herself had become ill after a number of days. Her own children developed the infection subsequently, presumably as result of contact with their mother.

The preliminary investigation which had been carried out earlier had included a survey of the local dairies, all of which supplied only raw milk to their customers. In this survey, samples of milk had been taken from all dairies for both field and laboratory examination. The methylene-blue reductase tests showed complete decoloration in all instances within 3½ hours, indicating high bacterial counts for the community milk supply as a whole. Moreover, capping of milk bottles by hand was found to be the rule, and in most instances methods for handling milk and for cleaning and sterilizing equipment were considered to be unsatisfactory. Garget was found in two cows, one on the "A" dairy farm, and one on the "D" farm. Samples of milk from all dairies and from the infected cows on the farms of dairies "A" and "D" had been sent to the Kamloops Branch of the Division of Laboratories for further study but the reports of the examinations carried out were essentially negative.

Despite this absence of specific laboratory evidence involving it in the outbreak, a visit was again made to the "A" dairy and farm because of the apparent close relationship between it and the cases of septic sore throat throughout the

community. As a result of this visit it was learned that a farm-hand named "R" had become ill with a sore throat on February 26th and had been confined to bed for two days. He had been isolated from others in a bunkhouse but had been nursed by Mrs. "A", who also continued her duties in the bottling of milk and washing of bottles. "R" returned to work two days after the onset of his illness. Subsequently the "A" cow, which had had garget, developed mastitis, following an injury to the udder. In addition to this information it was learned that Mrs. "A" became ill with a sore throat on March 26th and Mr. "A" had come down with a similar type of infection on March 28th. Mrs. "K", a neighbour, nursed Mr. and Mrs. "A" from March 26th to April 16th, at the same time doing the bottling and washing in the milkhouse, assisted by "R". Mr. "K" looked after the milking of the cows during this time and another neighbour attended to the delivery of milk. Mr. "K" developed septic sore throat on April 17th. It was not possible to decide whether milk from the infected cow was used for human consumption. It does appear probable, however, that this cow had been kept in the herd of milch cows throughout the whole period of the outbreak.

Summary

In April, 1945, an investigation was made into the cause of an outbreak of septic sore throat affecting 136 persons in a small town in British Columbia having a total population of about 900. The epidemic was confined to the town itself, with very few cases being reported from the surrounding rural district which has a population double that of the town.

The outbreak was explosive in nature and lasted for one month. Almost as many adults as children were affected.

Investigation of the epidemic demonstrated that 81 per cent of persons suffering from the infection purchased their milk from the same dairy. The investigation failed to reveal any other food or drink as a common source of infection but it did reveal that an employee of the dairy concerned had been ill with a severe sore throat some time previous to the outbreak of the epidemic; that one of the milch cows developed mastitis subsequent to this, following an injury to an udder; and that all persons on this farm having to do with the handling of milk were among those affected by the epidemic.

Conclusion

On the basis of the epidemiological evidence it would appear logical that this outbreak of septic sore throat was due to the use of infected raw milk. It should not be necessary to point out, again, that pasteurization of milk would have prevented the outbreak.

Mortality Reductions in Ontario 1900-1942

IV

(Tuberculosis)

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IN a previous note (1) a question was raised regarding factors responsible for the striking declines in death rates of all age groups under 50 years of age in Ontario, 1900 to 1942. The greater part of these declines has been accounted for by declines in a comparatively few specific causes (2) but, in order to show the trends of those causes and to explore, a little, the factors which may have been responsible for them, the death rates outlined previously (2, 3) under age groups are here re-arranged under specific causes. This re-arrangement provides, as well, an outline of forty-three years of mortality, as recorded, from several of the principal causes of death in the first fifty years of life.

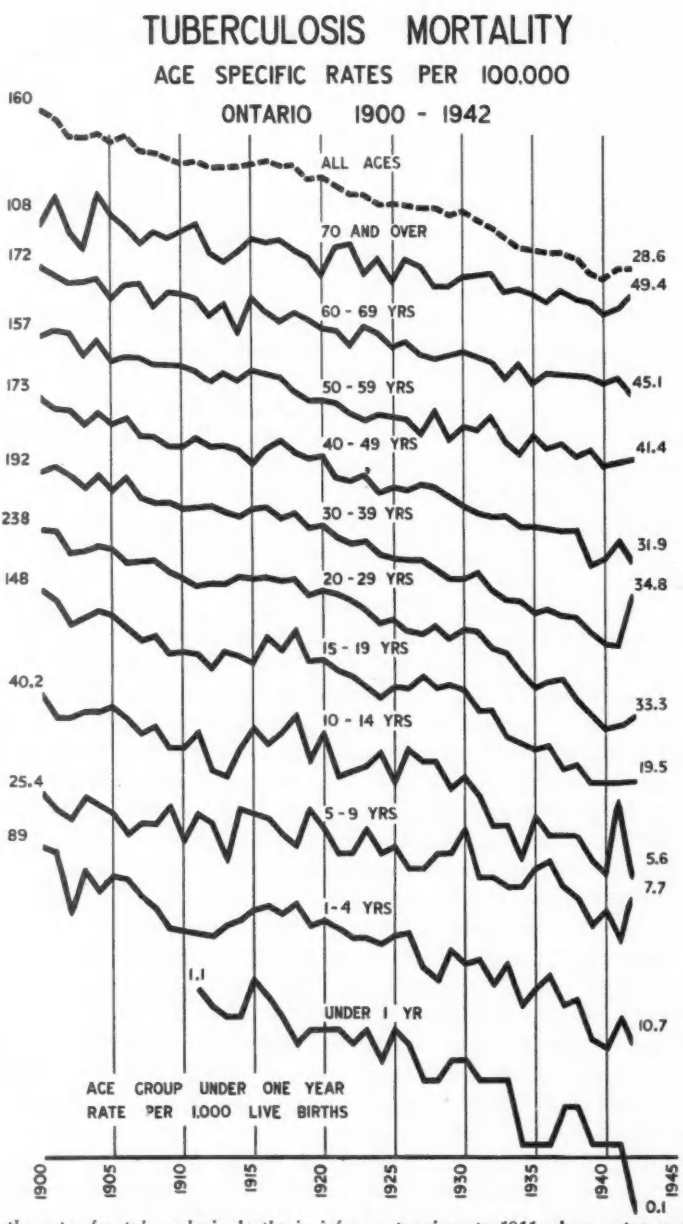
Tuberculosis

The recorded tuberculosis death rate, shown in Plate 1, has fallen from 160.1 per 100,000 in 1900 to 28.6 in 1942. The most striking features of this decline, apart from its extent, are, first, the strong tendency to uniformity in the rate of decline throughout the period, and, second, the strong tendency to parallelism, i.e. to proportionately equal declines, in the various age groups. Any satisfactory explanation of the decline, therefore, must be compatible with, if not also explain, these features.

Is the decline due to a change in the seed, or in the soil, or to changes in both of these two possible variables? In other words, regarding the seed, is the organism less virulent, a qualitative difference, or is it less generously distributed, a quantitative difference? In regard to the soil, is the host better able to withstand the infection through changes in resistance, specific or general, or has treatment altered the outcome so as to reduce mortality as indicated?

There is no evidence whatever, apart from the decline itself, to suggest that the organism has become less virulent, and in the progress of the disease in the human and lower animals to-day there is enough to place any such suggestion in the very questionable class. Any more extended consideration of this factor is not warranted.

What of the quantitative changes in the seed? There is no need to review in detail the development, since 1900, of tuberculosis control, which has as its basis the restriction of spread of infection. Briefly, there has been the increase from one sanatorium with less than one hundred beds in 1900 to thirteen sanatoria with approximately 3600 beds in 1942; an increase from less than 0.03 beds for every recorded tuberculosis death in 1900 to over 3 beds for every tuberculosis death in 1942, an increase of over one-hundred fold (4); there has been the



As the rates for tuberculosis deaths in infancy, previous to 1911, show extreme fluctuations from year to year and are thus quite incompatible with reality, they have been omitted. These data are included however in the rates for all ages where their erratic character and uncertain quality do not distort the general picture of the much larger figures.

The data, number and rates, from which the plate has been made, are available on request, from the Department of Epidemiology and Biometrics, School of Hygiene, University of Toronto.

development of dispensaries, of stationary and travelling clinics, of wide-spread case-detecting programs through clinical investigation, tuberculin testing and X-ray examination, first among contacts of cases, later in special groups and now including whole communities; cases have been registered, followed and supervised; municipal and provincial assistance has been provided on an increasingly liberal scale; and, on another plane, regulations have been implemented through which isolation can be enforced, etc. There have been as well, in this period, and with well-proven effect, the development and progressively wider application of pasteurization of milk and of programs for the control of tuberculosis in cattle.

Apart from such deliberate measures of control, other changes have tended to restrict the distribution of the seed. There has been, on the part of the profession as well as the public, the acceptance of the communicability of tuberculosis,—of the infection spreading from a source to a new host not through any mysterious means but by the many avenues that our way of life provides. There has been, too, on the part of the profession and the public, the further development, still far from complete, of a sanitary conscience (5); this has effected material changes in our environment and in our personal hygiene. The stigma that was associated with tuberculosis, that caused its concealment and consequently facilitated its spread, has been replaced by the public demand that cases be found and, if necessary, isolated. Standards of living and of working have changed. Families are smaller, possibly with less congestion and less exposure in the home. Although urbanization and industrialization have increased at the expense of the better rural life, some of the evil effects, physical at any rate, have been offset by provision of better community, shop, and home sanitation in its broadest sense. From all forms of exposure the infant particularly has been given more protection, especially from direct contact with its household associates including the invalid in the home; it sleeps more often now in its own crib rather than in the bed of its parents, and the tan of out-of-doors is preferred to the pallor of the closed room. Single beds have probably increased in proportion to double beds. The common drinking cup is now somewhat taboo, though still too common. Soap and hot water are more generously supplied and used. Even the clinical thermometer gets more attention in its transfer from person to person. These changes and many others have all tended strongly to reduce the amount of exposure.

What has the soil, the host, had to do with the reduction of tuberculosis? Has specific resistance changed? Apart from some recent control of silicosis as a predisposing factor in tuberculosis, it is very difficult to establish that there has been any change in specific resistance in the forty-three year period. While there may have been, throughout hundreds of generations, some natural selection of more resistant strains of humanity through elimination of the weaker strains, there is nothing in our knowledge of the history of tuberculosis, incomplete though it is, to indicate that the decline in Ontario since 1900 is directly due, in any significant degree, to such selection. Nor can the decline be attributed to naturally acquired immunization operating to greater advantage in this short period than in the past; there is nothing in our knowledge of immunity in tuber-

culosis to support any such contention. Changes in specific resistance, then, have not been factors of importance, if they have operated at all, in this decline.

What of general resistance? The increase in stature of the younger generation is often attributed, possibly correctly, to changes in diet. It is true, too, that tuberculosis mortality increased in European countries, especially Germany and Austria, during the 1914-1918 war, and increased also in occupied countries and in others involved in the 1939-1945 war; these increases are generally charged to malnutrition. But there were other factors (6)—unsettled lives, longer hours, harder work, greater fatigue, probably overcrowding, less isolation of cases, even lack of soap, etc.—all or any of which may have influenced the increases. Even if malnutrition were the cause of the increase in tuberculosis in Europe and improvement in diet the reason for the increase in the stature of the young people in Ontario, it does not necessarily follow that the earlier diet in Ontario was deficient in so far as resistance to tuberculosis was concerned or that the change in the diet, though increasing the stature of the people, actually increased that resistance. The state of nutrition in Ontario in the past century was not at all comparable with the advanced state of malnutrition in some of the European countries showing increased rates. It must be remembered, too, that adequate nutrition, as we understand it to-day, is no guarantee of protection against tuberculosis. Further, examination of all specific mortality rates in Ontario fails to reveal any other cause showing a parallel decline suggesting a similar influence of nutrition; in mortality from other respiratory disease, for instance, there is no evidence of any such beneficial effect of improvement in general condition. Although it would be rash, if not wrong, to contend that improvement in nutrition and general condition (whatever that is) has not been any factor in the decline in tuberculosis, the evidence for its playing any great part is not at all convincing or conclusive.

The value of treatment in improving the outcome of the individual case may be accepted but this is quite different, as indicated below, from accepting extension of treatment, in quantity or quality, as the explanation of the marked decline in mortality.

Add together all these factors noted affecting seed and soil—the control measures, the changes in environment and habits of the people, possibly changes in diet and in general condition, and the improvement in and wider application of therapeutic procedures—add these all together and they still fail to explain the most strongly marked feature of the decline, the tendency to uniformity. All these factors have increased vastly over the years so that, had the decline been determined by and dependent on them only, it should have become progressively faster, consistent with the increasing force of these factors; the rate of decline in the last decade of this experience should have been very much faster than in the first. But, as shown, the rate of decline in the last decade is but little faster than in the first. Quite obviously, then, all the factors mentioned are not adequate, in themselves, to explain the recorded decline. Some other factor or factors must have been operating during this period and it is necessary to cast farther afield in search of them.

Although the available records (since 1869) show tuberculosis mortality

in Ontario to have reached its peak in 1900, it is altogether likely that the actual peak was earlier, improvements in reporting in the later years of the last century probably accounting entirely for the apparent increase to the recorded peak (7). In fact, there is some evidence, which may be given at another time, that mortality in certain age groups was falling considerably before 1901. Without presuming on that, however, it seems a fair assumption—fair, in that it is in keeping with general knowledge of tuberculosis, does not clash with any established fact or widely accepted view, and is compatible, too, with our knowledge of other conditions—it is a fair assumption that, preceding the onset of reduction in mortality, there would have been a reduction in morbidity and, preceding this, a reduction in infection. It is more reasonable to postulate such a sequence in spite of the lack of recorded data in regard thereto, than to accept a marked decline in mortality suddenly setting in and affecting similarly all age groups in 1901 or any other date. It is reasonable that any change in living conditions—economic, environmental, hygienic, etc., which would tend to reduce intimate contact in the home or community could result in a decrease in the distribution of infection. Such a reduction in infection may well have occurred some time in the past, perhaps even before the people left their native lands to migrate to Ontario, perhaps at the time and as a result of conditions of the early settlement and opening of the province, perhaps at some later period of development. The result of that decrease in distribution of infection could be a decrease in the rate of production of new cases, new sources of infection. The resulting lowered concentration of infective foci, other things being equal, might then maintain tuberculosis in the succeeding population at a correspondingly lower level than obtained previously. It might, however, do more. It might so influence the balance (8) between sources and susceptibles that the sources in one period would yield in the subsequent period a still lower concentration of sources, with, consequently, a progressively lower amount of disease. This phenomenon has been well demonstrated—and readily, it being an acute disease—in the control of diphtheria through toxoid where, it has been shown, the non-immunized benefited from the reduction of cases and sources, first in the immunized and then among themselves, and the rate for the whole population fell to much lower levels than could have been anticipated as a direct result of toxoid alone. An initial decrease in tuberculosis infection, then, whenever instituted and by whatever means, and with all other conditions remaining constant, could thus become self-propagating, and, provided it was not interrupted by untoward circumstances or adverse shift in the complex balance of sources and susceptibles, could in itself effect a progressive subsequent decline. In that event, a declining trend, initiated and established in the last century (though not clearly recorded) and inherited along with the disease itself from that period, could be one of the factors responsible for the decline in mortality since 1900.

It must be emphasized that, in raising this hypothesis, and it is only an hypothesis, there is no intention of casting any doubt on the value of control measures applied since 1900, or of suggesting that improvements in living conditions, in environment, habits, possibly in diet, etc., are of no consequence. Far from it! Without these factors, a progressive decline might well have been

completely offset by adverse conditions—urbanization, industrialization, and depression—through which the Ontario population has passed at times since 1900, or the decline might have been very much slower. In short, control measures are based on too sound principles and too sound experience to be in any way discredited by taking due cognizance of other factors which may have either supplemented or been supplemented by them. Many physicians, for instance, know of specific cases of tuberculosis which would not have occurred if a case, a source of infection, had been removed from the family earlier. Some know even of the deaths of infants which received their infection while a case was "on the waiting list" for a bed in a sanatorium. Most physicians know, too, of cases which, by the best criteria available, have survived only because of treatment. And, in general, among the provinces of Canada and the countries of the world those with the most aggressive control programs have to-day the lowest rates. The admission of the possibility of a progressive, self-propagating decline, established at an earlier date and operating under conditions maintained favourable to it—the admission of this, or of any other factor, cannot therefore be construed as deprecating the recognized value of all available anti-tuberculosis measures. But it does help to explain the sustained uniformity in the rate of decline of mortality and the near parallelism in the declines in various age groups which have obtained since 1900, and it helps to explain the fact that the decline in Mexico (7) before control measures were officially instituted and organized was quite similar to, though at higher levels than, that in Ontario where control measures had been developing for over thirty years.

There is another point of interest in Plate I. It will be noticed that in 1900 the rate of 238 per 100,000 in the 20-29 age group was higher than that in any other age group. This was typical of that time. In 1942 the rates in all age groups of 50 years and over are considerably greater than the rate of 33 per 100,000 in the 20-29 age group. Why this shift in the age of highest mortality? Some part of it may be due, as everyone realizes, to changes in diagnosis and certification affecting the rates in older age groups to a greater or lesser extent than in the younger, but it is not likely that this is the full explanation. Nor is it likely that it is due to the older age groups being adversely affected by or benefiting less from the changed conditions of life. Rather, as W. H. Frost has shown (9), the shift is due to the fact that the older age groups have all passed through earlier experience with tuberculosis when, in their twenties and early thirties, they, as a group, contributed very much more to tuberculosis mortality than they do now. They carry over from that more intense early experience, into the later years of life, a high residue of infection which results now, even in old age, in higher mortality rates than obtain for those in the twenties and thirties to-day.

Summary

In falling from a rate of 160.1 per 100,000 in 1900 to 28.6 per 100,000 in 1942, tuberculosis mortality has shown a strong tendency to uniformity in the rate of decline throughout the period and a tendency to near parallelism in the declines in the various age groups. If the decline were dependent entirely on

control measures which have increased vastly over this period, and on improvements in living conditions, diet, etc., since 1900, the rate of decline should have become progressively faster, in keeping with the increased force of these factors, instead of maintaining a fair degree of uniformity. These factors then do not adequately explain the decline and the influence of other factors must be admitted. It is suggested, as an hypothesis, that a decline in infection probably occurred at a considerable time before the turn of the century, and so influenced the balance between sources and susceptibles, to give a self-propagating progressively declining trend which was inherited, as well as the disease from the past. The admission of this hypothesis does not question the value of control measures or other improvements but helps to explain the uniformity in the rate of decline, the near parallelism of the decline in the various age groups since 1900, and the nearly parallel decline in other countries where control measures had not been applied.

The shift in peak mortality from the 20-29 group in 1900 to the older ages in 1900 is noted and briefly explained, in accord with the analysis and deductions of W. H. Frost, by the older age group carrying over a high residue of infection from a much more intensive experience in their twenties, when they, as a group, contributed very much more to tuberculosis mortality.

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The Incidence of Pinworm Infection in a Military Camp in Ontario

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THE incidence of enterobiasis (pinworm infection) among the servicemen in military camps in Canada has received very little attention. At a meeting of the Royal Society of Canada in 1942, Cameron and Miller (1) presented the results of examination of 787 recruits in Montreal and Kingston in whom the incidence was 13.7 per cent. In the age group 18 to 21 about 19 per cent were positive and in that over 21 about 10 per cent were positive, on the basis of a single examination by the NIH swab.

The present report gives the results of the examination of 150 men in a military camp in Ontario.

Procedure and Results

Through the kind co-operation of the Royal Canadian Army Medical Corps it was possible to have swab examinations done on 150 men; 58 of these were ward patients in a camp military hospital and 92 were in the military training centre. The NIH swab (2), found in previous surveys to be the most efficient and convenient means of collecting and transporting specimens, was used. The swabs were taken, as instructed, on consecutive mornings. A total of 618 swabs was taken, an average of 4.1 swabs per person. Five out of 150 men examined, or 3.3 per cent, were found to be infected with the pinworm, *Enterobius vermicularis*. Swabs per person were as follows: A single specimen was obtained from 7 subjects, two swabs from 15, three swabs from 23, four swabs from 13 and five swabs from 92 men. The swabs of the 58 hospital patients were obtained in 1942 and of those in the training centre in 1944. In the first group the swabs of 3 patients were positive and in the second group those of 2 showed ova of the parasite. The positive findings were established on the first swab in 3 men and on the third swab in 2. Only one of the three infected men in the first group had complained of periodical irritation; two others had no symptoms suggestive of pinworm infection. No similar data were available for the 2 infected men in the second group. The length of time in the service was also given for the hospital patients; it ranged from 1 week to 3.5 years. The three infected patients had been in the service for 2 months, 2 years, and 3.5 years respectively. These records were not given for the men examined in the training centre.

DISCUSSION

The above data indicate that the incidence of enterobiasis among 150 service men examined in a military camp was low at the time of the survey. The number of men examined was too small to warrant a general conclusion. The number of swabs taken per person was also too small to ensure that all infected cases were disclosed. The results obtained by Cameron and Miller, however, showed a much higher incidence on the basis of examination of only one swab per person.

Unfortunately, there are no comparable data on the incidence of enterobiasis among young men in the general population. A previous survey among 324 adults, both females and males, in a Toronto hospital (3) revealed an incidence of 9.8 per cent. The ages of the subjects ranged from 14 to 90 years and an average of 3 swabs per person was taken. The incidence was found to be much higher, however, among parents of infected children (4). Cram and her associates (5) have conclusively demonstrated in a series of studies that crowding increases the incidence and that it is an extremely difficult matter to prevent the spread of enterobiasis, because of the large number of eggs deposited by the parasite and scattered by an infected person and because of the resistance of ova to physical and chemical agents. Sawitz (6) found the incidence twice as high among inmates in large dormitories as among those in single or double rooms. Nolan and Reardon (7) have been able to demonstrate pinworm ova on almost any object in homes where one or more members of the family were found to be infected. It might be expected that the ova could be similarly disseminated in camps where people are closely associated and that the prevalence of the infection would have a tendency to increase with the lapse of time. The incidence of enterobiasis, as reported here, is thus surprisingly low. One may be tempted to conjecture that sanitary measures have not only prevented the spread of the infection in the camp, but also have kept the infection in some men at an undetectably low level.

Summary

The NIH swab examination of 150 servicemen in a military camp in Ontario showed that 5 men, or 3.3 per cent, were infected with *Enterobius vermicularis*. A total of 618 swabs was taken, an average of 4.1 swabs per person.

The author wishes to express her appreciation to the following officers of the R.C.A.M.C.: Lt.-Col. M. R. Elliot, Major A. F. W. Peart, Capt. J. M. Malcolm and Capt. L. P. Allen, who kindly co-operated in securing specimens for this survey, and to Dr. D. T. Fraser, Professor of Hygiene and Preventive Medicine, University of Toronto, for his help in preparing the manuscript and making the necessary arrangements to carry out the survey.

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Canadian Journal of Public Health

LOCAL HEALTH UNITS FOR THE UNITED STATES AND CANADA

IN the development of public health on this continent during the past seventy years the contributions made by the American Public Health Association, through its leaders, have had an important place. The publication, by The Commonwealth Fund, of the report of the Association's Committee on Local Health Units* marks another epoch in public health history. Under the leadership of Dr. Haven Emerson, whose work in public health is so well known, the Committee has outlined the requirements for providing full-time health services for the entire population of continental United States. The study was begun in April, 1943. Referring to the situation at that time, the Committee states: "One-third of the nation lives under sub-standard local health organization, ill-equipped to give basic minimum health protection at all times and to meet public health emergencies quickly and efficiently."

The Committee, made up of State and local health officers, representatives of the United States Public Health Service and schools of public health, and Foundation representatives, adopted five basic principles for guidance in its proposals. These included the complete covering of each area and population with the services of a professionally trained and experienced health officer serving on a full-time basis; local responsibility for public health as a primary essential of local government; units of population of a minimum of 50,000; the average distance from the headquarters to its periphery to be not greater than twenty-five to forty miles; and such factors as per caput income, persons per physician, and the number of hospital beds per thousand, to be taken into consideration. On the basis of these principles, and following detailed studies, it was suggested that 1,127 units would provide the services for the forty-eight States.

The Committee proposes a plan whereby the 3,070 counties and their contained cities will be served by the suggested units. More than three-fourths of the units planned contain populations of 50,000 or more, and only 14 per cent less than 45,000. More than one-fourth of the units include only

**Local Health Units for the Nation. A Report by Haven Emerson, M.D., Chairman, Subcommittee on Local Health Units, Committee on Administrative Practice, American Public Health Association. New York: The Commonwealth Fund, 1945. 333 pages. $1.25 (U.S. funds).*

one county, and more than two-thirds are multi-county units. The Committee obtained from competent sources of Federal, State and local governments data relating to the number of full- and part-time employees engaged in tax-supported services at the local level and, secondly, the amount expended for the salaries of these persons and the total expenses of local health services for each suggested unit. Estimates of the number of professional, technical and lay personnel required were prepared, together with an estimate of the expenditures. As a result, it was agreed that a community of 50,000 or more persons should be able generally at a cost of approximately $1 per caput to provide the necessary services. To provide such additional services as may be found to be locally desirable and necessary for a more complete health service, $2 or $2.50 would be required. The provision of $1 per caput would cover the services of a qualified and experienced medical officer of health, a public health engineer, ten public health nurses including one of supervisory grade, a sanitary inspector, and three persons for clerical work.

Part-time medical services would be provided in tuberculosis and venereal-disease control and for infant, preschool, and school work. For populations of 100,000 and over, there would be a proportionate increase in staff, including two or three full-time administrative medical officers, one full-time dentist and two full-time dental hygienists, and one full-time health educator as well as certain other specialist members.

It is of interest that the local health services in the United States could be provided by approximately 1,200 units. The plan not only requires the services of a large number of qualified and experienced medical officers of health but suggests the use of more than 6,000 local practising physicians for part-time clinical services. Many units would, of course, employ full-time clinicians. At the time the study was commenced, there were less than 15,000 public health nurses employed by official local agencies. A minimum coverage, not including bedside care, would require 26,000. If a visiting nurse service was extended to care for maternity patients and for general sickness, at least twice that number would be needed. The total sanitary personnel requires to be increased only slightly for minimum coverage, but the Committee recommends greater professional leadership in this field. It is recognized that the public health dental service is only in its beginning. Fewer than 1,300 public health dentists are now employed in local health services, whereas 3,800 would be needed; the majority would serve part-time.

The difficulties of implementing such a plan are appreciated. Making reference to this, the *American Journal of Public Health* has pointed out that "even where political, financial, and personnel factors are presently favourable, existing legislation of some States does not authorize, though it seldom specifically prohibits, city-county or multi-county units."

To have such a plan is of tremendous value to the people of the United States. The requirements can be visualized, and the people and the Government alike can see clearly how health can be safeguarded and improved.

And what of Canada? In 1941 the Canadian Public Health Association was able, as a result of the study by the Provincial health officers and their staffs, to present to the Dominion Government an estimate of the number of

units necessary to provide full-time health services for every part of Canada. It is appreciated that the problems in the various Provinces differ greatly, and relate among other considerations to the distribution of population and to the extent of the areas. The Association's Committee reported that 250 units, including urban and metropolitan areas, would provide the essential services. The units recommended are more numerous than are suggested in the United States, but the vast areas to be covered in Canada require more units even though the population of some may be considerably less than the desired figure of 50,000. In both the United States and Canada, public health leaders have presented plans that are eminently reasonable and represent a minimum of expenditure commensurate with essential services. There can be no question that the expenditure of $1.00 per caput is required to furnish a reasonable measure of service. In Canada, the Honourable Brooke Claxton, Minister of National Health and Welfare, has strongly supported the proposal that 35 cents per caput be granted to the Provinces for advancing local health services. He has announced also the Government policy of making the following annual grants as well: (1) a grant not to exceed $3,000,000 to assist the Provinces in providing free treatment for persons suffering from tuberculosis; (2) a grant not to exceed $4,000,000 to assist in preventing mental illness, and in the care and training of mental defectives; (3) a grant not to exceed $500,000 to assist in the prevention and control of venereal disease; (4) a grant not to exceed $500,000 to aid in extending the program for the prevention and treatment of crippling conditions in children; (5) a grant of $250,000 to aid in training personnel for public health work; (6) a grant not to exceed $100,000 to encourage research in public health; and (7) a grant of $1,243,900 to permit the pensionable age for blind persons to be lowered from 40 to 21 years of age, and to provide for the treatment of the blind and of persons suffering from conditions that might lead to blindness. The grants, both for local health services and for the specific needs mentioned, are dependent upon a solution of the problems now before the conference of the Dominion and Provincial authorities. The Department of National Health and Welfare is being organized to meet the enlarged needs and to assist these Provinces in every possible way in the development of a forward movement in public health. Each of the Provinces has its public health plan and is seeking the essential personnel to make possible the establishing of additional full-time health units. The planning has been well and carefully done. Many physicians, nurses, engineers and other technically trained persons returning from the Services are interested in public health as a career, and, through the Department of Veterans' Affairs, assistance in post-graduate training is being provided. Trained personnel, therefore, will be available when the Provincial Departments are in a position financially to assist the local communities. Such action is dependent, in turn, on assistance being given to the Provinces by the Federal Government. The provincial programs are already under way, but the extent of the development will depend on the outcome of the Dominion-Provincial deliberations.

The Canadian Public Health Association, 1944-1945

REPORT OF THE HONORARY SECRETARY

WITH the termination of the war, the Canadian Public Health Association looks forward to the implementation of plans for the expansion of full-time health services in all parts of Canada. The contribution made by the Association in the advancement of public health in Canada needs no eulogy; the record of its thirty-five years of service speaks for itself. Important as this contribution has been, however, the officers of the Association realize that it is not adequate to-day. This session of the Executive Council will review the Association's present program and consider suggestions for activities in the post-war period. The Executive Committee has proceeded with the appointment of a physician to serve as full-time medical director, and Dr. J. H. Baillie will assume these duties on December 1st. His appointment is an important development in the Association's history and the first step in planning a wider post-war program.

In the interval since the last annual meeting (November 1944), the Association's major activities have been maintained, in spite of the obvious difficulties attendant on the sixth year of war. The thirty-third annual meeting was held in the Royal York Hotel, Toronto, on November 6, 7 and 8, 1944, with a registration of six hundred members. In addition to four general sessions, Section meetings were held for those concerned with epidemiology, public health nursing, public health administration, service (military) hygiene, and veterinary inspection services. Seventy-five papers were presented at the nineteen sessions. The meeting again stressed the importance of public health grants being made at an early date to assist the Provinces in the establishment of full-time local health services and in the control of tuberculosis and the venereal diseases, the treatment and prevention of mental illness, and other national problems. Among the distinguished visiting speakers were Dr. George F. Buchan, Medical Officer of Health for the Borough of Willesden, Kilburn, London; Dr. Melville McKenzie, of the Ministry of Health, London; Dr. James A. Crabtree, Deputy Director of Health for the United Nations Relief and Rehabilitation Administration, Washington; Lieutenant-Colonel Gaylord W. Anderson, M.C., United States Army; Dr. Felix J. Underwood, Executive Officer of the Mississippi State Board of Health; Dr. John A. Ferrell, Medical Director of the John and Mary R. Markle Foundation, New York; Dr. W. A. McIntosh, recently appointed Canadian representative of The Rockefeller Foundation; and Miss Dorothy Deming, an international authority on public health nursing and now a member of the staff of the American Public Health Association. The meeting provided an opportunity for the public health leaders of Canada to pay tribute to Dr. Ferrell, for his contribution to the advancement

Reports presented at a meeting of the Executive Council held in the Chateau Laurier, Ottawa, on November 30, 1945, and covering the activities of the Association during the year from November 1944 to October 1945.

of public health in Canada during the years in which he was associated with the International Health Division of The Rockefeller Foundation.

The annual conference of the Vital Statistics Section which brings together those concerned with vital statistics in the federal, provincial, and municipal departments of health, as well as members of life insurance companies, was held in the Chateau Laurier, Ottawa, on September 25, 1944, permitting the members to attend the Fourth Dominion-Provincial Conference on Vital Statistics which occupied the following four days. In addition to the presentation of formal papers, problems in the registration of vital records and the compilation of statistical data were considered. During the year the Section's Subcommittee on the Revision of the International List of Causes of Death collaborated with the Vital Statistics Branch of the Dominion Bureau of Statistics in the preparation of a new edition of "The Physicians' Handbook on Death Registration and Certification" which will be issued shortly. Another subcommittee of the Section has been engaged during the past two years in the development of a national plan for the classification of causes of stillbirth. This subcommittee has considered further the national definition of stillbirth for statistical purposes, the allocation of live births under twenty-eight weeks' gestation, and rules of selection where joint causes are stated.

The Association's Laboratory Section, which serves as the Canadian society of bacteriologists, pathologists, chemists and others engaged in laboratory work in health departments, held its thirteenth annual Christmas meeting in the Royal York Hotel, Toronto, on December 18 and 19, 1944. Seventy members were present and twenty-one papers were given at the three sessions.

It had been planned to hold the Association's thirty-fourth annual meeting in Toronto on November 12, 13 and 14 of this year, in conjunction with the annual conference of the Ontario Health Officers Association. However, in compliance with the Government's request that large meetings involving railroad travel be postponed for an indefinite period, the Executive Committee decided in July that the 1945 meeting would not be held. Accommodation for the 1946 meeting has been reserved at the Royal York Hotel for May 6, 7 and 8. Indicative of the interest in the meeting is the fact that reservations for exhibit space have already been received from some twenty companies.

In view of the difficult situation still existing with respect to railway and hotel accommodation, the 1945 Christmas meeting of the Laboratory Section and the fall conference of the Vital Statistics Section have also been cancelled.

The annual examinations for the *Certificate in Sanitary Inspection (Canada)* were held in the various provincial centres on September 11, 12 and 13, 1945. Fifty-one candidates were successful, bringing to 386 the number of sanitary inspectors who have obtained the Canadian qualification since certification was introduced by the Association in 1935. Further information about this aspect of the Association's work is presented elsewhere.

The Association is presently co-operating with the Canada and Newfoundland Education Association in the conduct of a survey and research project which will explore how best the health of school-age children may be maintained, having in mind the responsibility of the school authorities. A joint committee,

consisting of three members of each organization, has been set up under a full-time chairman. The committee has reviewed very carefully how best the problem can be approached and it has been decided that for the first year they will canvass present practices in all aspects of school health. At the end of the year, the members will review these practices, approve or reject certain of them, continue to investigate the validity of certain claims about others, and canvass new fields that might be investigated, with a view to promoting joint interest on the part of the two groups, the health workers and the teachers. In each Province a sub-committee has been set up under the aegis of the Minister of Health and the Minister of Education, and conferences are being called by the provincial chairmen at the instance of the chairman of the joint committee. The chairman will, it is expected, report to the central committee in terms of factual information about the procedures and practices, at a meeting to be held at Christmas or in January, after which the next step will be planned.

Indicative of the type of contribution that the Canadian Public Health Association can make was the request of the Dominion Council of Health, scientific advisory body to the Department of National Health and Welfare, that the Association carry out a survey with a view to determining a fair and equitable schedule of salaries for persons trained in public health and to recommend as to the propriety of a provincial salary range. Although the Association was anxious to be of service, and it was felt that public health workers in Canada would welcome an effort towards obtaining more adequate salaries, the members of the Executive Committee believed that such a survey would have to be deferred at least until the end of the war, when suitable personnel might be available to conduct it.

The Study Committee of the Public Health Nursing Section is studying the relationships between health authorities and institutions and agencies that care for the sick, with a view to determining whether or not closer relationships would result in better service. Committees have been set up in several cities and it is hoped that from their findings it may be possible to make recommendations.

Elsewhere in this report the Honorary Treasurer records an operating surplus for 1944 amounting to $2,100. Heartening though this is to the officers of the Association, I must emphasize what Dr. Currey discusses in some detail; namely, the urgency of obtaining additional support which will permit the extension of the Association's present program and make it possible to plan in terms of long-range activities.

The contribution of the Canadian Life Insurance Officers Association, in the form of a grant of $3,500 towards the work of the Association, has not only made possible many of the Association's activities during the past year, but has also encouraged our officers to plan a wider program and to seek for it additional financial support from other sources. A promise of a grant has been made by the Government of the Province of Ontario in support of such projects as could be construed as general public health progress. The Executive Committee has been asked to appoint a finance committee to explore the possibilities of seeking financial assistance to supplement the present grants-in-aid.

It is desired that a committee be named at this meeting of Council to study

the present measures of social security and the draft proposals. In the last report of the Committee on Health Insurance the members recommended that it be disbanded and replaced by a Committee on Social Security. The new committee should be selected in such a way that conferences with the Medical Director may be possible and the committee may be prepared to make representations at Ottawa, if it is thought desirable, as these measures are being developed.

It is with deep regret that I recall the untimely passing, last January, of Dr. B. T. McGhie, Deputy Minister of Health and Hospitals for the Province of Ontario since 1935. Always a generous supporter of any organization that had for its objective the advancement of public health, he had contributed much to the Canadian Public Health Association, which he served as President in 1944.

J. T. PHAIR, *Honorary Secretary.*

November 1, 1945.

REPORT OF THE HONORARY TREASURER
1944

FROM the appended Revenue Account, it will be seen that the excess of revenue over expenditure for the year ended December 30, 1944, was $2,101.69, as compared with a surplus of only $54.56 in 1943. This increase was due principally to three factors: an increase of almost $1,000 in the net revenue from advertising, a credit balance of almost $500 from the annual meeting after all expenses were met, and an increase of $250 in fees for the examinations in sanitary inspection.

While a surplus of $2,100 is encouraging, particularly when it is contrasted with the deficits of other years (it will be recalled that as recently as 1941 the amount was $1,375), it must not be taken as an indication that the Association's financial problem is basically any less difficult than in former years. If the Association is to engage in a wider program, which will entail the full-time services of a physician who will serve as medical director, with office assistance and travel expenses, etc., the present budget of $13,500 will have to be increased by at least another $10,000 per annum.

In presenting this financial statement, I would particularly stress the very limited budget of the Association. It is essential to remember that during the war years the Association has carried an increasing responsibility without any additional assistance being given to Mr. Randall who, with Miss Minnes, has been responsible for all the work of the Association through our central office. The Association's expenditures afford little indication of the volume of the work, and it may be fairly said that if the organization maintained the usual business offices, with sufficient assistance, the budget would have to be very substantially supplemented. Because of the generosity of the School of Hygiene, University of Toronto, there are no expenses for rent, telephone, and other services. As stated in the report of the Honorary Secretary, the Association is proceeding to implement, by the appointment of a full-time medical director, the program

that has been discussed on many occasions. It is most encouraging that Dr. J. H. Baillie, who has already manifested his ability in public health, is to carry forward this enlarged program. With the extension of the budget to cover this appointment, the Association will be undertaking a greatly enlarged program on a budget which is still proportionately very small. To provide this increased budget should not constitute a problem. The work to be done is so important and the need so evident that, if an adequate presentation is made, the necessary funds should be readily obtained.

Because of the interest of the Honourable R. P. Vivian, M.D., Minister of Health of Ontario, and his appreciation of the contribution that the Association can make, provision has been made in the budget of the Province for a grant of $5,000 to the Association. The Canadian Life Insurance Officers Association has, during the past ten years, given generous support to the work of our Association by providing an annual grant, increased in recent years to $3,500. It is hoped that the Federal and Provincial authorities will find it possible to share in the support of the Association's program.

The audited statements for 1944 are appended.

D. V. CURREY, *Honorary Treasurer.*

November 1, 1945.

CANADIAN PUBLIC HEALTH ASSOCIATION

BALANCE SHEET

AS AT 30th DECEMBER, 1944

ASSETS

Cash on Hand		$ 273.53	
Cash in Bank		3,279.78	
Accounts Receivable—Advertising	$1,006.50		
Subscriptions	167.42		
Reprints	68.50		
Sundry	16.00		
Total	$1,258.42		
Less: Reserve for Doubtful Accounts	35.00		
		1,223.42	
Deposit with Postmaster		15.00	
			$4,791.73
Investments—Province of Ontario, 4½% Bonds due in 1949—Cost			1,012.50
Canadian Journal of Public Health		$1,000.00	
Office Equipment	$373.98		
Less: Reserve for Depreciation	287.95		
		86.03	
			1,086.03
Prepaid Expenses			139.06
			$7,029.32

LIABILITIES

Accounts Payable	$ 660.19	
Prepaid Subscriptions	499.00	
Accrued Commissions and Expenses	82.96	
		$1,242.15
Surplus—Balance as at 31st December, 1943	$3,685.48	
Add		
Excess of Revenue over Expenditure for the Year (see Schedule A)	2,101.69	
		5,787.17
		$7,029.32

TORONTO: 5th February, 1945.

HILL, TESKEY & CO.,
Chartered Accountants.

CANADIAN PUBLIC HEALTH ASSOCIATION
REVENUE ACCOUNT
FOR THE YEAR ENDED 30th DECEMBER, 1944

Schedule A

EXPENDITURE

Printing		$6,286.64
Postage on Journal and Mailing Cost		469.41
Advertising and Promotion Expense		88.00
Honoraria		338.93
Salaries		3,474.00
Stationery and Office Supplies		200.89
Postage, Telephone and Express		331.13
Laboratory Section:		
Expenditure	$154.63	
Revenue, Christmas Meeting	128.10	
		26.53
Milk Committee		25.92
Vital Statistics Section		8.64
Unemployment Insurance		64.53
Provision for Depreciation—		
Office Equipment		74.80
Miscellaneous Expenses		216.25
Discounts Allowed and Bank Charges		149.34
		$11,775.01
Excess of Revenue over Expenditure for the year, transferred to Surplus Account		2,101.69
		$13,876.70

REVENUE

Advertising	$6,426.50	
Less: Commissions Paid	1,465.43	
		$4,961.07
Subscriptions—Less Refunds		3,700.82
Canadian Life Insurance Officers Association—Grant		3,500.00
Conventions and Meetings:		
Receipts	$1,945.50	
Expenses	1,511.60	
		433.90
Sanitary Inspectors:		
Sales of Manual		313.15
Examinations—Revenue	$ 930.00	
Cost (without Salaries)	525.26	
		404.74
Correspondence Courses:		
Communicable Diseases	$ 224.00	
Less Cost	222.12	
		1.88
Sanitation—Revenue	$ 232.00	
Less Cost	201.08	
		30.92
Food Control—Revenue	$ 249.00	
Less Cost	166.62	
		82.38

Reprints—Sales	$1,248.59	
Less Cost	1,012.08	
		236.51
Bacterial Food Poisoning—Sales	$ 66.14	
Less Cost	12.30	
		53.84
Development of Public Health—Sales		8.75
Safe Milk, 1941—Sales	$ 38.41	
Less Cost	11.52	
		26.89
Bond Interest		45.00
U.S. Premiums, etc.		76.85
		$13,876.70

REPORT OF THE EDITORIAL BOARD

THIS is the seventeenth annual report that I have had the pleasure of making on behalf of the Editorial Board of the Journal. This period has included the trying years of the depression and the years of the war, with their many problems. To obtain suitable articles is always difficult, but the war years have made it a particularly serious problem. It is easy to plan an ideal journal to serve the medical officer of health, or the public health nurse, or some other member of the health department. It is not so easy to plan a journal to serve the needs of all members of a health department: There must be provision for the publication of new scientific work in the technical fields and for articles of a review character which in themselves do not constitute new contributions to knowledge; and there is need also to record epidemiological investigations and changes in administrative procedures. Included in the 500 pages constituting Volume 35, 1944, were sixty-one articles on various aspects of public health. Paper rationing continued to be a problem during the year, and in order to keep within the quota allowed, it was necessary to limit the number of copies printed and, from time to time, to reduce the number of pages per issue.

Publication costs during 1944, including printing and mailing charges but not salaries, amounted to $6,783, as against $6,183 in the previous year. The gross revenue from advertising was $6,426 as compared with $4,691 in 1943. This increase, a net amount of $979 after deducting commissions paid to advertising agencies and the Association's advertising representative, is very satisfactory, and reflects not only greater interest in the field of public health and preventive medicine on the part of advertisers, but also Mr. Harry F. Coles's energetic presentation of the Journal as an advertising medium. The Executive Committee has approved an increase of approximately $10 a page in the advertising rates, effective January 1, 1946.

For the nine months ended September 30, 1944, the average monthly circulation (audited) was 3,213 copies, of which 3,000 were paid. During 1944 an average of 3,403 copies was printed each month, at a cost of approximately 17 cents each. The regular subscription rate of $2.00 a year, therefore, barely covers the cost of printing and mailing, quite apart from editorial expenses. Much thought has been given by the Executive Committee to increasing the membership fees in the Association, and the Provincial Departments of Health

have expressed their willingness to consider any plan which will permit of a larger revenue from this source. Recommendations relating to the fees will, it is expected, be presented shortly to the Executive Committee.

Other publications issued by the Association during the period covered by this report included the "Manual for Sanitary Inspectors", presenting the essentials in sanitation, communicable-disease control, food inspection, etc.; a "Standard Milk Ordinance", outlining milk-control legislation for adoption by health departments; and "Medical Certification of Deaths", an exercise for use by faculties of medicine in instructing students in the proper filling out of the death certificate. Since the "Manual for Sanitary Inspectors" was first published in 1937, more than 1,800 copies have been distributed. The preparation of a revised edition is under way and it is expected that copies will be available in the spring of 1946. In 1940 the Association published "The Development of Public Health in Canada", recording the history of public health in the Dominion and outlining the present organization of public health in the Provinces and in the Federal Government. As the edition has been exhausted, it is planned to have each of the chapters revised, incorporating the changes in administration that have been made during the war years. The publication of this volume has served a very useful purpose and it is hoped that with the co-operation of the Federal and Provincial Departments of Health a new edition may be issued during 1946. Over the years the Journal, too, constitutes a record of the progress in public health in Canada, and the value of recording in it scientific papers and reports, as well as news in the field, becomes more and more evident as time goes by. Through its pages one can trace the movement that led to the creation of a national department of health in Canada, the development of the movement for social welfare, and the foundations on which have been built the modern programs in venereal-disease control, industrial hygiene, mental hygiene, public health nursing, and public health engineering.

In closing this report, I wish again to record appreciation of the work of Mr. Robert L. Randall in editing and publishing the Journal as well as the other publications of the Association. To publish the Journal is alone a full-time responsibility, but it has not been possible to free Mr. Randall from the detailed work of the Association in order that the Journal might be further developed. Although it is gratifying to receive expressions of appreciation of the Journal, the members of the Editorial Board are most conscious of the gap between the ideal which they hold for the Journal and what is possible at the present time.

R. D. DEFRIES, *Editor.*

November 1, 1945.

REPORT OF THE COMMITTEE ON THE CERTIFICATION OF SANITARY INSPECTORS

AN aspect of the Association's program that is unique among the activities of voluntary agencies is the training of sanitary inspectors. The *Certificate in Sanitary Inspection (Canada)* granted by the Association has become recognized as a prerequisite to full-time employment in sanitary inspection in all the

Provinces. Since the examinations were introduced in 1935, three hundred and eighty-six candidates have obtained the Canadian qualification, representing approximately three-quarters of the total number of inspectors employed on a full-time basis in Canada. The Association has followed the leadership of the Royal Sanitary Institute in Great Britain in establishing standards and conducting examinations for sanitary inspectors. In the United States, only local provisions have been made for the training and qualifying of such personnel; and the Committee on Professional Education of the American Public Health Association has included in the field of sanitation only those who have had university training.

Of fundamental importance has been the problem of establishing an adequate standard of preliminary education. At the outset it was appreciated that high-school or technical-school training was essential, and that junior matriculation or its equivalent should be established as the basic requirement as soon as it was possible to do so. In Great Britain those desiring to obtain the certificate of the conjoint examination board of the Ministry of Health and the Royal Sanitary Institute are required to have the standing demanded for admission to university. For a period of three years following the introduction of the Canadian examinations in 1935, registration was offered to all employed sanitary inspectors in Canada without reference to their education. After due notice this privilege was withdrawn on December 31, 1938, and all candidates were required to have had three years of high school or its equivalent. In September 1941 the requirement was raised to four years, but subsequently it was necessary for the Committee to lower the standard temporarily in order to accept applications from candidates who had taken their high-school work many years previously and were not in the age group for active military service. On April 1, 1945, junior matriculation was again established as the standard for registration. Every consideration is being given to returning service personnel, and the Committee is accepting for registration those who have had two years of high-school work or its equivalent provided they have served with field-hygiene sections or have had other suitable experience. The establishing of an adequate preliminary education is one of the most important steps in obtaining competent personnel for the office of sanitary inspector. It is difficult to appreciate the extent of the progress that has been made during the past ten years and to realize how general is the acceptance, on the part of candidates and health departments alike, of the fact that the sanitary inspector of to-day must have a satisfactory educational background and adequate training. When it undertook this work, the Canadian Public Health Association assumed a much larger responsibility than was realized. The program now includes the provision of training through correspondence courses as well as the holding of examinations.

In the conduct of the examinations, a large share of the responsibility for passing a candidate is left with the Provincial Departments of Health, as two of the three members of the provincial examining board, which conducts the oral examinations and directs the field inspection visits, are named by the Provincial Health Officer. If, in the opinion of the provincial board, a candidate is unsuitable or inadequately trained, they may so report him, and the judgment of the

board is considered final by the Central Board of Registration and Examination, the members of which review the written papers and report on the final marks. The advantages of having the same written papers in all the Provinces, and of holding the examinations at one time, are evident. The present system, therefore, combines Provincial responsibilities with those assumed by the Central Board.

It is appreciated that correspondence courses are not an adequate provision for the training of sanitary inspectors. Formal courses of instruction, however, even if given in several centres in Canada, would present a serious financial problem to the majority of candidates. Funds for the training of personnel to serve in provincial and local health departments will, it is hoped, be made available; and it is encouraging that among the public health grants to the Provinces, now under consideration by the Dominion Government, assistance for the training of personnel is included. There is no question that sanitary inspectors should share fully in such provisions. If such funds are made available, it will mark a new day in the training of sanitary inspectors. In the past it has not been possible to give them the opportunity for training that their office demands, and it is to their credit that they have made such substantial progress in obtaining a background of knowledge and experience to equip themselves for their duties.

For returned service personnel the Department of Veterans' Affairs has made provision for a period of training covering not less than six months which permits candidates to serve in health departments and at the same time receive instruction through the correspondence courses conducted by the Association. The start having been made, it can be hoped that similar provisions may be continued in order that the sanitary inspector of the future may be more adequately trained for his important work.

The 1945 examinations for the certificate were held in eight provincial centres—Vancouver, Edmonton, Regina, Winnipeg, Toronto, Montreal, Saint John, and Halifax—on September 11, 12 and 13. Of the 65 candidates, 51 passed in all the subjects and were granted the certificate;12 were successful in all but one subject, which they may repeat at a subsequent examination; and 2 candidates failed. The successful candidates and those conditioned in one subject are as follows:

British Columbia: Byron Arden, Harry Walter Black, William Edward Howard Branston, Edwin Peter Fleischer, Malcolm James Harper, William Roy Lawrance, George Alfred Geraud Norris, Roy George Reynolds (conditioned in Communicable Diseases), Stanley Judson Sharp, and Ernest B. Winstanley. In addition, Donald Duncan McNab, who wrote the examinations in 1944, is now eligible to receive the certificate.

Alberta: Harry George Chase, George Balharry Hill, Leslie Robert Mallett, Logan Henry Nuthall, Frederick Joseph Patton, and Malvern Leroy Friend.

Saskatchewan: Jack Thomas McGarvey and Sidney Francis Price (conditioned in Communicable Diseases).

Manitoba: Frederick Charles Austin, Julius Krisko, Douglas Stevenson Morrison (conditioned in Sanitation), Harold George Pitt, John Simon Puls, William James Herbert Purcell, and John Stasiuk.

Ontario: Albert Batten, Henry Gordon Burke, John Grimason, Arthur Ronald Hall, Lloyd George Heard (conditioned in Sanitation), Jacob Leonard Hiebert, Harry Frederick Luscombe (conditioned in Sanitation), Leonard Basil Overton, and Donald Raymond Smith.

Quebec: Joseph Arthur Blanchette (conditioned in Food Control), Charles M. Bonin, Edouard Brassard, Anthony Colucci, Edward Denis, Pierre Derome, Armand Dompierre (conditioned in Food Control), Charles A. Grégoire, Joseph Jules Eloi Jalbert, Joseph Lalumière, Eugène Leclerc (conditioned in Food Control), René Leclerc (conditioned in Food Control), Lucien Pelletier, Bruno Ranger (conditioned in Food Control), John Joseph Stock, Joseph Roland Trudeau, and Joseph Henri Marcellin Trudel.

New Brunswick: George Davis Hamilton.

Nova Scotia: Wesley James Brownlee, Charles Howell Castell, Arthur Cecil Conrad, John Duncan Finlayson, Douglas Henry Lemoine, Peter MacIntyre (conditioned in Communicable Diseases), Francis McNeil, Thomas Blase Stephenson (conditioned in Food Control), Jerome Nicholas Tompkins, and Donald Fraser Tupper.

The Committee gratefully acknowledges the co-operation of the following members in the conduct of the examinations:

British Columbia: Mr. R. Bowering (chairman), Dr. J. M. Hershey, and Mr. Vernon Enman.

Alberta: Mr. D. B. Menzies (chairman), Dr. G. M. Little, and Mr. J. Butterfield.

Saskatchewan: Mr. J. G. Schaeffer (chairman), Dr. G. R. Walton, and Mr. M. H. Kennedy.

Manitoba: Dr. C. R. Donovan and Dr. Maxwell Bowman (chairmen), Mr. F. S. Adamson, Mr. L. B. English, Mr. Geo. W. Kelly, and Mr. L. G. Williams.

Ontario: Dr. R. D. Defries, Dr. A. R. B. Richmond, Dr. F. O. Wishart, Mr. D. S. McKee, and Mr. R. W. Ruggles.

Quebec: Mr. T. J. Lafrenière and Mr. Léopold Cabana (chairmen); Dr. Adélard Groulx, Dr. Jules A. Brien, Dr. L. A. Chabot, Dr. A. J. G. Hood, Mr. Aimé Cousineau, and Mr. Avila Pare.

The correspondence course in sanitary inspection, introduced in 1942, has been continued, and 55 candidates are enrolled in the work of the first term of the 1945-46 session, which opened on September 28th. To expedite the qualifying of ex-service personnel, three examinations have been announced for 1946, the dates being March 28, 29 and 30; June 27, 28 and 29; and September 11, 12 and 13. The correspondence course, normally given in three terms of twelve weeks each, has been rearranged to meet the candidate's individual schedule. Candidates who enrolled before October 15th will complete the course by the middle of March and thus be able to take the examinations at the end of the month. For the benefit of candidates who enrolled late in October and in November, the work of the first term will be repeated during the spring of 1946, thereby making it possible for candidates to complete the three terms before writing the June examinations. Already 65 candidates have made application for the 1946 examinations. A group of 53 members of the Canadian Army Overseas, all of whom were serving with field-hygiene sections, were registered for the examinations during 1944-45 and on their return from overseas they may, if they desire to do so, be affiliated with health departments for training in the various aspects of civilian sanitary inspection with which they are less familiar, and at the same time receive instruction through the Association's correspondence courses. Thus substantial progress is being made in providing health departments with sanitary inspectors who in addition to a satisfactory educational background have had adequate training in the field, and by the end of 1946 a considerable number of these men will be available for appointments in full-time health units throughout the Dominion.

J. G. CUNNINGHAM, *Chairman.*

November 1, 1945.

REPORT OF THE COMMITTEE ON THE NATIONAL HEALTH HONOUR ROLL

EACH year since 1938 the Canadian Public Health Association, in co-operation with the American Public Health Association, has conducted a project in health evaluation, known since 1943 as the National Health Honour Roll. All county, city-county, and multiple county health departments providing full-time health services, together with cities of over 25,000 with full-time health services, have been eligible for participation in this project, which has involved the filling out of a comprehensive questionnaire outlining the community's health work.

With last year's awards, the competitive aspect of the effort was discontinued, but through the co-operation of the American Public Health Association, Canadian cities and county health units will continue to be offered facilities for an appraisal of community services in terms of local problems and the degree to which they are being met. The "Reporting Area for Health Practices", as the project is now known, employs the same Evaluation Schedule that was used for the National Health Honour Roll and medical officers of the participating communities will continue to be sent grading charts and interpretive letters. The results of the grading are presented in chart form in an annual publication entitled "Health Practice Indices", and communities whose schedules contain adequate material are listed in this book as constituting the reporting area for health practices.

The latest volume of "Health Practice Indices", relating to schedules submitted for 1943 and 1944, presents 71 individual line charts showing the range of health practices among 243 communities in thirty-two States and four Provinces of Canada. To quote from the Introduction:

"These charts will be found useful to local and State health officers, to other public health personnel, and to citizens generally in comparing local experience with a large sampling of practices over the United States and Canada. The local health officer can indicate on each chart the standing of his community and in a few minutes discover items of service which are far below average. This should show where emphasis is needed for improvement. Several health officers, using similar books previously published and covering practices in 1941-42 and 1943, found it helpful in their educational program to republish or to make lantern slides of some of the charts in which they had inserted the standing of their own community. This visualization of local achievement has proved to be effective with both lay and professional audiences.

"State directors of local health services as well as bureau directors of specialized services will find that the listing of the various indices of health practice for each individual community and the relative standing of each community in the charts will provide data of particular interest to them. The inventory serves as a basic plan on which to build improvement. It provides knowledge of the existing situation which is essential as the starting point for corrective steps. A state director of local health service with such a listing can discuss a local situation with pertinent facts at his command and with similar facts from other communities as a comparative background."

Because of the fact that this plan could not be announced to health officers in Canada until late last March, only two cities—Hamilton and St. Catharines, Ontario—were able to submit schedules by the closing date, April 15th. Considerable interest has been manifested in the project, however, and it is expected that there will be widespread participation in it during the coming year. It has been suggested that the Provincial Departments of Health might contact their own health units, inviting participation. Schedules would be distributed by the Provincial Department and, when completed, would be returned to the Department, which would then forward one copy from each health unit to the American Public Health Association, for grading. The completed schedule would, it is believed, provide the Department with valuable information about local health work.

Briefly, the advantages of participation in the plan are: Each community profits from a study of its public health facilities, utilizing a standard form; committee participation with the health officer in filling out the schedule enlarges community understanding and support of local health needs; and an impartial evaluation of local health facilities against a background of accepted and existing practices is made available to the community, while the community in turn is contributing to the advancement of public health generally by becoming a participant in the Reporting Area, thus making available a widespread sampling of existing health practices.

The action of the American Public Health Association in extending to Canada this program, which is made possible by a grant from the Commonwealth Fund of New York City, is greatly appreciated.

J. T. PHAIR, *Chairman.*

November 1, 1945.

REPORT OF THE COMMITTEE ON THE QUALIFICATIONS AND TRAINING OF PUBLIC HEALTH PERSONNEL

IN last year's report of this committee it was recommended that the standards approved by the American Public Health Association be adopted, with any amendments that might be considered necessary. The Committee on Professional Education of the American Public Health Association began its work in 1932. At that time it was most difficult to know where to begin in attempting to establish qualifications for public health personnel, but under the chairmanship of Dr. W. S. Leathers the spade-work was done, and when Dr. Leathers retired, Dr. William P. Shepard (the present chairman) carried the work forward. Its continuing purpose is "carrying out research and the development of standards for professional qualifications of high standard". Referring to this, Dr. Shepard recently said: "Public health is only as successful as the people in it. There are many impediments, such as political interference, insecure tenure, inadequate financial support, and dearth of qualified personnel. It has been, and is, the conviction of the Committee that the remedy lies in improving the quality of personnel through better selection and training."

The Committee has completed fifteen reports relating to personnel of health departments, and requests for more than 30,000 copies of reprints have been filled. The fact that the submission of a report to the Governing Council of the Association follows three to four years of study by the Committee is evidence of the thorough consideration that is given. The opinions and advice of all those who can contribute are sought, and when a report is finally presented to the Governing Council for adoption, it can fairly be said that the recommendations embody the consensus of all the representative groups concerned. The reports, moreover, are not final, but must be reviewed at intervals of from two to three years, when changes are made to meet altered conditions, etc.

Probably nothing is more necessary to the advancement of public health in Canada than the defining of qualifications for the various personnel, thus making it possible for health departments to know the accepted qualifications for each office. In the deliberations of the Committee on Professional Education, the Canadian viewpoint is always requested; and as the public health program and its administration are so much alike in the two countries, it is likely that only very minor changes will have to be made in any of the reports adopted by the American Public Health Association in so far as positions to be filled by those with university training are concerned. As yet the Committee on Professional Education has not considered qualifications for sanitary inspectors and other members of health departments without university training, but the Canadian Public Health Association has established standards of education and training for those serving as sanitary inspectors in Canada. The minimum requirements for the employment of public health nurses in Canada, adopted last year by this Association and the Public Health Section of the Canadian Nurses Association, are in general agreement with those adopted by the American Public Health Association.

During the coming months it is planned to publish in the Canadian Journal of Public Health a number of the reports adopted by the American Public Health Association and approved, with any amendments, by this committee of the Canadian Public Health Association.

R. D. DEFRIES, *Chairman.*

November 1, 1945.

News

British Columbia

AS A RESULT of legislation known as "The Tourist Camp Regulation Act," passed during the 1945 session of the Provincial Legislature, a new set of regulations pertaining to tourist camps and resorts has been put into effect. These regulations require that all tourist camps be inspected and licensed. Among the points dealt with in the regulations are: water supply, sewage disposal, toilets, garbage disposal, construction of buildings, and maintenance of camps. The inspections will be made by qualified sanitary inspectors whose reports will be submitted through the Provincial Health Officer to the Licensing Authority. The Public Health Engineer of the Provincial Board of Health is a member of the Licensing Authority.

* * *

THE MONTHLY REPORT for September on examinations made in the Division of Laboratories, Provincial Board of Health, showed a total of over 23,000. This is more than half the total examinations made in one full year a decade ago.

* * *

IN RESPONSE TO a radio message from Vancouver that the cook of Pellaire Mine on Falls Creek was seriously ill and could not be moved, Miss Fern Primeau, public health nurse of Williams Lake, made a 300-mile trip by car, boat and saddle horse to the heart of the Taseko Lake mountain region. Miss Primeau left Williams Lake on October 13th and journeyed by car sixty-five miles to Taseko Lake Camp, where she camped overnight in a tent in below-zero weather. Next morning she travelled by boat twenty-two miles across the lake to the trail leading up Taseko Mountain to the mine. There she was met by a guide with horses, who started her on a snow-covered trail to the camp. At the camp she administered penicillin to the sick woman, and was in constant touch with a physician in Vancouver by radio telephone. On October 16th she left by horse down the seven-mile mountain trail to Taseko Lake, on her return trip. When she arrived at the lake a gale was blowing, and as there was no boat to meet her, she was obliged to spend the night in a tent before continuing her journey.

Saskatchewan

RESIDENTS of two proposed "health regions" in southern Saskatchewan will vote this month on the establishment of health regions provided for under Provincial legislation. The balloting will be concurrent with municipal elections. The areas involved are the Swift Current Health Region No. 1, with a population of 64,718, and the Weyburn-Estevan Health Region No. 3, with a population of 55,087.

A favourable vote by the residents of these large areas will mean a banding together of all the municipalities within the regions to provide public-health or preventive services. The Provincial Government will pay two-thirds of the costs of such services. The regional boards, consisting of representatives of all included municipalities, may also decide to provide curative services, dental care, and specialists. The Provincial Government is prepared to pay 50 per cent of the cost of diagnostic services, while hospital and medical services will be supported by Provincial grants.

In each region three professional committees of physicians, nurses, and dentists, nominated by their colleagues in the area, are to be appointed in an advisory capacity.

Manitoba

MR. MARK FLATTERY, formerly Sanitary Inspector at The Pas, has been appointed Senior Sanitary Inspector in the Department of Health and Public Welfare at Winnipeg.

* * *

UNDER the "Training on the Job Plan", four service veterans have been employed to date by the Department of Health and Public Welfare as student sanitary inspectors. After a course of study and practical demonstration, these students will write examinations which qualify them for the *Certificate in Sanitary Inspection (Canada)*, granted by the Canadian Public Health Association.

* * *

DURING recent weeks, the Bureau of Public Health Nursing has increased its staff by thirteen to a total of 70 nurses serving the Province. As more local Health Units come into operation, present plans call for ex-

pansion of the public health nursing staff to a total of 200 within five years.

* * *

MEMBERS of the Department of Health and Public Welfare have been co-operating with the National Film Board in the production of a 16-mm. film on Rural Health Units. This film is being financed and sponsored by the Department of National Health and Welfare in the interests of public health education throughout Canada. Main emphasis is placed upon the improvement of health in rural areas, using the Dauphin Rural Health Unit as the central example. Satisfactory progress is being made, with the shooting already completed, according to the producer, Mrs. Evelyn Cherry, and the director, Ernest Reid.

* * *

AT THE TWENTIETH annual meeting of Manitoba Pool Elevators the following resolution was passed: "That we recommend to our locals that we give our Provincial Board authority to establish a hospital memorial fund to the amount of 20 per cent of our 1944-45 surplus." This resolution, passed unanimously by the meeting, will have to be ratified by the local pool elevator associations before coming into effect. It will make over $200,000 available to local communities for the construction of rural medical and nursing units—"rural health centres" as they are called. These are small (6-8 bed) hospitals for emergency and maternity cases; 75 such units are planned for the Province. The proposed contribution from Manitoba Pool Elevators will be a tremendous boost to the building program, and is further evidence of the fine public spirit of this farmers' co-operative organization.

Ontario

SUBSTANTIAL PROGRESS is being made in the organization of full-time health units in Ontario. Eight units are now functioning and a number of other communities are prepared to go forward with the plan in co-operation with the Provincial Department of Health.

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DR. F. S. BURKE has been appointed Chief of the Division of Blindness Control, Department of National Health and Welfare, Ottawa. He has been serving as Chief of the Foreign Relations Division.

SURGEON LIEUT. CMDR. A. L. MCKAY, R.C.N.V.R., has been appointed Director of the Division of Venereal Disease Control in the Department of Public Health, Toronto. Dr. McKay was formerly Director of the Division of Preventable Diseases in the Department of Health of Ontario.

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DR. EDMUND A. GRANT has been appointed full-time Director of Dental Health Services in the Department of Public Health, Toronto.

New Brunswick

LIEUT.-COL. J. A. MELANSON, R.C.A.M.C., whose appointment as Chief Medical Officer of the Province was announced in the October issue of the JOURNAL, returned only recently from overseas, where he had served in both theatres of operation, the Mediterranean and Northwestern Europe, his last appointment in the Army being A.D.H. at 2nd Canadian Corps Headquarters. Col. Melanson was mentioned in despatches for his work in Italy.

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MAJOR H. L. LOGAN, R.C.A.M.C., now returned from overseas, where he served in the Mediterranean and Northwestern Europe theatres of operations, has resumed his post as District Medical Health Officer in the Provincial Department of Health.

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DR. JEAN F. WEBB, D.P.H., has been appointed Director of the Division of Nutrition in the Provincial Department of Health.

Nova Scotia

THE NATIONAL PHYSICAL FITNESS ACT, as passed in September, 1943, requires the Provinces entering into the agreement to appoint an Advisory Council on Physical Fitness. These Councils meet at least once a year.

The second meeting of the Nova Scotia Advisory Council was held at Halifax on September 26th. To this meeting were invited the heads of about fifty provincial organizations interested in youth, and most of these were represented. Greetings from the Hon. F. R. Davis, Minister of Health and Public Welfare, who was unable to be present, were conveyed by the chairman, Dr. P. S. Campbell, Deputy Minister of Health.

At the morning session, reports covering

the work of the past year were presented by Dr. Wm. C. Ross, Director of Physical Fitness; Hugh A. Noble, Supervisor of Physical Education; and Juanita H. Archibald, Provincial Nutritionist. Dr. Ross reported chiefly on the developments which had taken place in community recreation and stated that approximately twenty-five communities in the province were planning a program. In some cases this would include modern playground facilities, and in others recreation centres would be built as "living war memorials." The great need of the future, as viewed by the director, was for adequately trained leadership to direct the work in these areas. He also expressed his appreciation of the excellent support which had been accorded to the movement by the Honourable the Minister of Health and the Government of the province.

Hugh A. Noble, in presenting his first report on the physical-education program, stated that training in this branch had been provided for the student-teachers at Normal College and for regular teachers at the last two summer schools. This would be followed up by refresher courses for teachers at present in service. A curriculum in physical education for the first six grades had been prepared and would be published this autumn. Mr. Noble expressed the hope that qualified supervisors would be appointed for cities, towns and rural areas.

The program of nutrition as outlined by Miss Archibald was to include the following: nutrition education in the schools; better school lunches; preparation of educational materials; consultation service for professional agencies; adult education in nutrition, particularly for low-income groups; work with hospitals, industries, and all food-handlers; and co-operation with existing programs.

The program as presented by the various members of staff was endorsed by the Council. In token of their general interest, members of Council requested that specific fitness undertakings should be allotted to the organizations associated with the endeavour. A motion was adopted urging the Federal Department of Health to arrange training courses for ex-service men and women who wish to qualify for positions as Community Leaders.

SEDLEY A. CUDMORE, M.A., LL.D., F.R.S., F.R.S.C.

DR. SEDLEY A. CUDMORE, Dominion Statistician, died suddenly on October 17th, at Quebec, where he was attending the conference of the Food and Agriculture Organization of the United Nations, as a member of the Canadian delegation.

Dr. Cudmore was born in Ireland in 1878, and came to Canada when a boy. While attending the University of Toronto, he was awarded a Rhodes Scholarship and studied at Wadham College, Oxford, for three years, completing the work for his Master's degree. On his return to Canada, he became a member of the staff of the University of Toronto, and was Assistant Professor of Economics until 1919, when he joined the Dominion Bureau of Statistics. During the following years he was intimately associated with Dr. R. H. Coats in the development of the Bureau, and when Dr. Coats retired in January 1942, Dr. Cudmore succeeded him as Dominion Statistician.

Primarily a statistical authority on trade and related matters, Dr. Cudmore served as chief economic adviser at the Imperial Conference in 1926 and at the Ottawa Conference of 1932. In 1935 he organized a statistical department for the Government of Palestine. Among the many public offices he held were those of the president of the Professional Institute of the Civil Service, and secretary-treasurer and vice-president of the Canadian Political Science Association. He was a frequent contributor to journals and was author of several books on economics, as well as editor, for many years, of the Canada Year Book. During the three years in which Dr. Cudmore served as Dominion Statistician, he rendered outstanding service and undertook the enlargement of the Bureau to meet the pressing demands arising out of the provision of family allowances as well as the extensive preparation for other health and welfare legislation. He will be greatly missed.

Abstracts

The Problem of the "Dangerous Carrier" of Haemolytic Streptococci

In the investigation described in this paper, 61 patients with scarlet fever and 343 patients with pharyngitis-tonsillitis without rash were studied to determine the relationship between the nose culture and the dispersal of haemolytic streptococci into the environment. Nose cultures were found to be positive in approximately two-thirds of the above cases. It was shown that such cases in general expelled 80 times the number of haemolytic streptococci expelled by those with negative nose cultures while the number of organisms indicated by streaked throat culture plates bore no relationship to the number recovered in the tests employed. However the throat remained positive for haemolytic streptococci longer than the nose in 95 per cent of cases. The frequent association of a positive nose culture and sinusitis resulted in a prolongation of the period of expulsion of large numbers of organisms as contrasted with those with rhinitis only. The presence of a rash had no influence on the number of haemolytic streptococci expelled. In the general population of the army camp under study the ratio of carriers with positive throat cultures (and negative nose cultures) to those with positive nose cultures was 4.45 to 1.

Morton Hamburger, Jr., Margaret Johnson Green, and Virginia G. Hamburger, J. Infect. Dis., 1945, 77: 68.

Rapid Development of Carrier State and Detection of Poliomyelitis Virus

A Detroit summer camp for boys opened on June 27, 1944, and five days later one boy developed poliomyelitis. He was considered to have been in the incubation stage of the disease on arrival. Stool specimens taken on July 9 were positive for 5 of 6 cabin-mates. One of these 5 developed paralysis three weeks later.

Epidemiological investigation suggested that the cabin-mates had acquired the virus during the six-day period in which they were associated with the original case. Stool specimens of inmates of other cabins were negative. The intestinal carrier state, indicating a rapid increase in virus, became established early in the above contacts and suggests that this may be the usual course of events. That an individual may harbour virus in his intestinal tract for some considerable time before the onset of illness is shown by the second paralytic case. Throat washings of this individual were positive for virus when hospitalized and negative one week later. Throat washings of 2 of the 5 contacts of the original case were negative for virus at the time their stools were positive. The evidence suggests that virus in the nasopharynx may be associated only with the acute stage of the disease, in contrast to the intestinal tract where it is known to be present before, during and after the clinical disease.

Gordon C. Brown, Thomas Francis Jr., and Harold E. Pearson, J.A.M.A., 1945, 129: 121.

Epidemiology of Acute Poliomyelitis in India Command

The incidence of poliomyelitis in British troops serving in North Africa, Italy, India and the Middle East and in American troops serving in the last two areas has been greater than in the armies at home. The disease occurred chiefly among young troops arriving as reinforcements and with less than two years' service. No increased occurrence in the native populations, military or civilian, was evident. Such comparisons might suggest that the troops encountered strains of virus differing from those of their homeland. Equally well it might mean only a greatly increased exposure to infection in large doses. Poliomyelitis occurred in the hot season when flies and dysentery were rife, and a recent previous attack of malaria or dysentery was a common history.

The most striking feature of the disease in India was that it occurred five times as frequently in British officers as in other ranks. Investigation suggested that this difference was most likely accounted for by the lower standing of hygiene in the officers' mess kitchens, the more frequent use by officers of civilian-run food establishments, and their greater consumption of cold or uncooked foods. The sanitary arrangements and supervision of food provision for officers were exceedingly poor and little knowledge

or pretence of hygiene was the rule rather than the exception in hotel, club and other public civilian kitchens.

Douglas McAlpine, Lancet, 1945, 249: *130.*

Clinical Action of Penicillin on the Uterus

COMPLETE abortions in 2 patients, in the same two-week period, immediately following penicillin treatment for venereal disease led the authors to review their records of pregnant women receiving the drug. Of 21 such patients, 8 manifested symptoms of uterine activity such as uterine cramps, bleeding or both, with 2 going on to complete abortion as noted above. Of the 8 patients with symptoms, 7 had received the same lot of penicillin, which suggests the possibility of an impurity. However, 4 other pregnant patients received penicillin of the same lot without symptoms developing and among 3 other lots used there was one reaction. Among 25 pregnant women treated with mapharsen and sulfathiazole, only 2 had symptoms, slight low pelvic cramps without bleeding.

A further survey was made to determine the effect of penicillin therapy on menstruation. Records of 206 mature female patients were reviewed and it was noted that 17 patients menstruated during the first 24-hour period following the onset of penicillin therapy. This is double the number of patients in this group expected to menstruate during any given 24-hour period. In a control survey of 253 similar patients but treated by methods other than penicillin only 7 menstruated in the first 24-hour period where 9 might have been expected to menstruate.

Herbert M. Leavitt, J. Ven. Dis. Inform., 1945, 26: *150.*

Outpatient Penicillin Therapy of Sulfonamide-Resistant Gonorrhea

THE various routines of time, dosage and so forth employed in the treatment of gonorrhoea and their successes and failures are reviewed by the author. In an attempt to work out a schedule suitable to an outpatient clinic without available hospitalization and with limited staff and facilities and one which would be a convenience to patients, it was decided to try a 4-hour treatment with a total of 100,000 units of penicillin given in 3 equal doses, 2 hours apart.

Sulfonamide-resistant cases—54 in number—were so treated and 42 of these were followed for a period of 21 days. The criterion of cure was defined as 3 consecutive negative cultures over a minimum of 21 days and 40 (95 per cent) satisfied this criterion. In the 2 failures, cultures became positive on 4th to 5th post-treatment days. Re-treatment of these 2 cases with 5 injections of 33,333 units at 2-hour intervals resulted in cure.

For public health clinics and office practice this shortened treatment schedule offers many advantages.

William F. Fidler, J. Ven. Dis. Inform., 1945, 26: *153.*

Industrial Hygiene Abstracts

Why is She Away? The Problem of Sickness Among Women in Industry

THAT two-thirds of the sickness absence was caused by only 16 per cent of the women workers, was disclosed during recent investigations of the Industrial Health Research Board into the health of women in industry. This and other facts revealed are evidence that serious attention should be paid to the following: the need for medical and personnel departments to concentrate on dealing with the small group of women who cause most of the sickness absence; the policy of engaging young married women on full-time work, since the majority of them have a high rate of sickness absence; the strain felt by women workers of long service; the necessity of a week-end break for shift workers; and the need for educating women workers on the value of balanced and adequate meals.

In the first investigation, which is reviewed in this pamphlet, the sickness records of about 4,500 women in five munition factories, during the last six months of 1942, were analysed from the standpoint of the nature, frequency and amount of absence and their relation to such factors as age, length of

service, civil state and type of work. To supplement this study, private interviews were conducted with 500 of the women previously studied. Half of the women interviewed had had more than the average amount of sickness and the other half, little or none.

When the records were analysed, it was seen that the sickness absence amounted to 7.8 per cent of the total working time and was at least half of the total time lost. Two-thirds of the sickness absence was caused by only 16 per cent of the workers. Diseases of the respiratory and digestive groups and functional nervous disorders accounted for most of the absence. Young married women had a particularly high rate of sickness absence, and those women in the longest service groups had longer absences through sickness than those with shorter service. There was some evidence that workers on production and also shift workers were particularly liable to sickness absence.

The results of the second study show the attitude of the women to various factors associated with conditions inside and outside the factory, and provide a useful index to causes of satisfaction and discontent. It was learned that most shift workers disliked changing from their usual arrangement and were discontented if a proper week-end break were lacking. The main objections to night work were inability to sleep well, alleged poor ventilation in the factory at night, digestive troubles, longer hours, and disturbance of family life. Personal worries were found to be associated with a high rate of sickness absence as were also full domestic responsibilities.

The pamphlet does not give a complete picture of the health of women in industry but the facts presented show with certainty the effect of various conditions on the frequency, nature and amount of sickness absence. It also illustrates the value of accurate records as an index of industrial health.

Industrial Health Research Board: Conditions for Industrial Health and Efficiency. Pamphlet no. 3, 1945.

Matching the Physical Characteristics of Workers and Jobs

THE process of selective placement consists of (1) matching the skill characteristics of workers and job and (2) matching the physical characteristics of workers and jobs. The existing techniques for relating the skill characteristics are relatively adequate but emphasis should be placed on the development of better techniques to solve the physical aspect of the selective placement problem. It is felt that all workers (handicapped and physically fit) should be placed successfully and safely on jobs, each in accordance with his individual pattern of physical capacities.

In this article is presented a study of certain current plans of both United States industry and United States government, for matching the physical characteristics of workers and jobs. The practices are described under the following headings:

1. Personal knowledge approach.
2. Jobs suitable for disability groups.
3. Rating scale approaches.
4. Modified rating scales.
5. Rating scales with disability information.
6. Quasi specific approach.
7. Specific approach.

The various techniques are reviewed in detail and their limitations suggested. Charts are included to show different record forms which are used, such as a job-analysis form for physical-fitness requirements, a physical-capacities form, a summary of placement requirements, and others.

An appendix to the article offers suggestions for the guidance of those engaged in selective placement work; it explains physical-demands analysis as that part of job analysis which determines the physical and environmental requirements of jobs, and physical-capacities analysis as that part of industrial medicine which determines the physical environmental capacities of workers.

The definitions of both physical and environmental factors given are ones which have been given considerable trial by analysts, physicians and placement officers under actual conditions.

Bert Hanman, Indust. Med., 1945, 14: 405.